

## A new species of *Stylidium* (Stylidiaceae) from Western Australia

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Manuscript received 22 March 1977; accepted 19 August 1980

### Abstract

A new species of *Stylidium*, *S. pendulum* is described. The species shows affinities with *S. coroniforme*, *S. macrocarpum*, *S. tenuicarpum* and *S. ricei* but with few other species of the genus.

### Introduction

While collecting material of the genus *Stylidium* in 1972 for cytological study, a distinctive undescribed species was found near Mullewa. It is described here so that the name may be available for a comprehensive cytological review of the genus in preparation by Dr S. H. James of the University of Western Australia.

### *Stylidium pendulum* Keighery sp. nov.

Figure 1 A-E, G-K

Herba perennis caespitosa robusta, caudice crasso saepe polycephala. Foliomina basalia dense conferta, erecto-patentia, lineari-oblongata, 2-6 plerumque 4 cm longa, ad 2 mm lata, longimucronata, glabra, margine hyalino. Racemus simplex 14-20 plerumque ca 15 cm altus, scapo piloso, glanduloso, 1-3 bracteato, 2-4 cm longo. Inflorescentiae bracteae lanceolatae, 1-2 mm longae, 1 per pedicellam bracteolae minutiae, 2 per flores. Pedicelli 1-4 mm longi. Calycis tubus ad anthesium 1-2 cm longus, glanduloso-pubescent, linearis. Calycis lobi 2-3 mm longi obtusi. Corollae lacinae ad 4-6 mm longae, 2 mm latae, extus glanduloso-pubescentes, armeniacae, ovate. Labellum conspicuum, appendiculis 2 minutis instructum. Columna ca 7-10 mm longa. Capsula linearis, 1.5-2.5 cm longa. Chromosomatum numerus gametae  $n = 14$ .

Caespitose perennial herb (dying back to a rootstock during the summer), rosettes single or several from a thick, short stem, often many headed. Leaves erect or spreading, narrow, oblanceolate, acuminate, pale green, glabrous, flat, with narrow transparent margins, mucronate 2-6 (mostly 4) cm long, 1.5-2 mm wide. Inflorescence a simple raceme, 14-20 cm tall, pilose with glandular and simple hairs, almost all glandular hairs near base, 1-3 bracts on scape, no small leaves. Scape bracts 2-4 cm long. Buds long, straight, at first pendulous, appressed to scape, then turning upwards through 150° to open. One bract subtending each pedicel, lanceolate, 1-2 mm long. Bracteoles 2 per flower, minute. Pedicels 1-4 mm long. Ovary linear, 1-2 cm long at anthesis, glandular pubescent (with no simple hairs). Calyx lobes 2-3 mm long, obtuse. Corolla apricot with a red stripe, lobes broadly ovate, tube 1-2 mm long, lobes laterally paired at 45° angle, approx-

imately equal, 4-6 mm long, 2-4 mm wide, underside pubescent with glandular hairs. Throat bare, labellum conspicuous, with partially divided prominent appendage. Column 7-10 mm long. Stigma green, solid. Ovule number 45-50. Capsule at maturity 2 cm long, brown. Seeds small, brown, pitted, rounded. Many collapsed seeds present. Chromosome number  $n = 14$ , from pollen grain mitosis.

*Holotype*: 479.3 km north of Perth on Wubin to Mullewa road, lateritic soil in leaf litter under *Acacia* and *Casuarina* spp., 1/8/1972, flowered in glasshouse Botany Department, University of Western Australia, Collected 20/9/1972 G. J. Keighery, 173. *Holotype*: PERTH; *isotypes*: MEL, PERTH.

*Other Collections*: 1½ km east of Pindar on Mullewa to Yalgoo Road, 28/9/1974 G. Perry, 367. PERTH.

*Discussion*.—The species is named after its pendulous buds which are at first straight and closely appressed to the stem, unlike other species of the section which have curved, often erect, buds. The species is most closely related to *S. macrocarpum* (Benth.) Erickson and Willis, *S. coroniforme* Erickson and Willis, *S. tenuicarpum* Carlquist and *S. ricei* Carlquist. It can be easily distinguished from *S. macrocarpum* which has rosy pink corolla lobes that are directly laterally paired, the labellum possessing many lobes and a paniculate inflorescence; from *S. tenuicarpum* which has short, triangular scales forming the leaf margin (Fig. 1 F and G), only non glandular hairs on the scape, an oblong yellow corolla and no bracts below the flowers on the scape; from *S. coroniforme* in lacking a conspicuous dorsal margin to the leaf, having a flat not finger-like stigma, possessing appendages to the labellum and lacking throat appendages. Finally it can be distinguished from its closest relative *S. ricei* Carlquist by its obtuse calyx lobes, solitary flowered lateral inflorescences, leaves having a hyaline margin of triangular scales and the leaves possessing an acute tip. Living plants of *Stylidium ricei* also differ in the shape and colour of the labellum and its lobes (Erickson 1958, plate 42, fig 12, and especially plate 37 where the species is illustrated in colour from life). A detailed comparison of *S. pendulum* and these related species is given in Table 1.

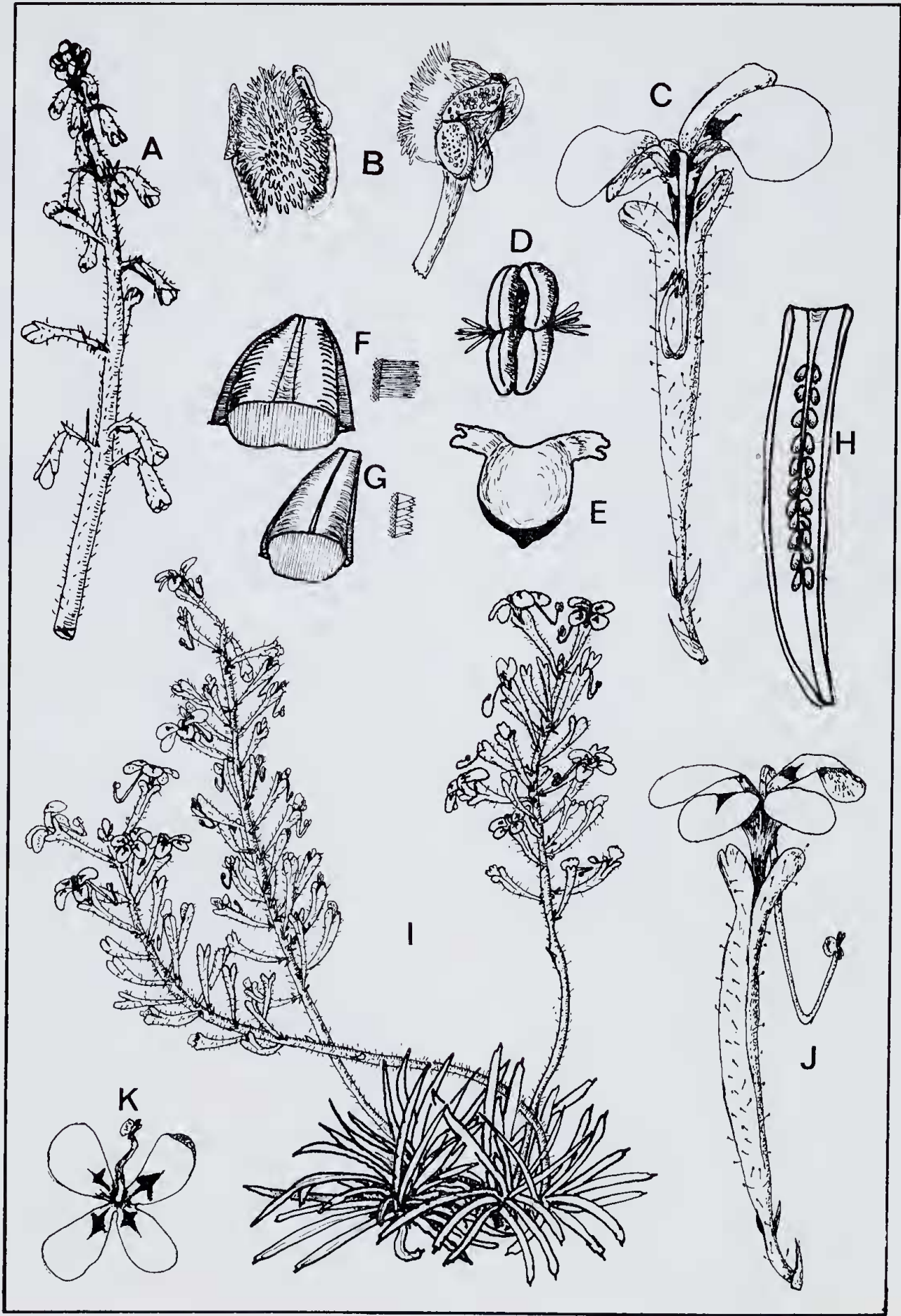


Table 1

*A comparison of S. pendulum and related species*

	<i>S. coroniforme</i> (type)	<i>S. macrocarpum</i> (type)	<i>S. ricae</i> (type)	<i>S. tenuicarpum</i> (type)	<i>S. pendulum</i> (type)
leaf margin	white entire	green, few triangular projections	few triangular projections	short white, triangular scales	long triangular scales
leaf apex	mucronate-ciliate	acute	acute	mucronate	mucronate
inflorescence	simple raceme	paniculate	paniculate	simple raceme	simple raceme
scape hairs	glandular, base glabrous	glandular/non glandular	glandular/non glandular	non glandular	glandular/non glandular
corolla colour	pink	pink	pink	yellow	apricot
petals paired	directly laterally	directly laterally	directly laterally	directly laterally	angled
shape of petals	1 oval	round-oblong	round-oblong	oblong	broadly ovate
shape of calyx lobes	narrow, blunt	broad, blunt	narrow, acute	acute	obtuse
labellum appendages	none	large, multi lobes	narrow, no lobes	narrow, no lobes	broad, two lobes
stigma shape	finger like	flat cushion	flat cushion	flat cushion	flat cushion
throat appendages	2, hair like	none	none	none	none
chromosome number (2n)	?	26	28	26	28
scape bracts	no	no	no	no	yes

*Acknowledgement.*—I should like to thank B. J. Keighery who provided the chromosome count, and Dr S. H. James of the Botany Department, University of Western Australia who provided plants and information on *S. macrocarpum*, *S. ricae* and *S. tenuicarpum* for comparison. The work was carried out while I was in receipt of a University of Western Australia Research studentship.

## References

Erickson, R. E. (1958).—“*Triggerplants*”. Perth: Paterson Broken-sha.

Figure 1.—*Stylidium pendulum* (A–E, G–K) and *S. tenuicarpum* (F). A.—young inflorescence showing pendulous buds x  $\frac{1}{4}$ . B.—two views of the stigma x 25. C.—abaxial view of flower x 4. D.—anthers x 25. E.—labellum x 25. F.—(*S. tenuicarpum*) T. S. leaf looking towards base, enlargement of hyaline margin x 25. G.—T. S. leaf x 4, margin x 25. H.—L. S. calyx ovary x 4. I.—whole plant showing habit x one-fifth. J.—adaxial view of flower x 4. K.—top view of flower x 4.